

<110> SJ BIOMED INC.

<120> Anti-obese immunogenic hybrid polypeptides and anti-obese vaccine composition comprising the same

<150> KR10-2004-0018551

<151> 2004-03-18

<160> 11

<170> KopatentIn 1.71

<210> 1

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> mimetic peptide for apolipoprotein B-100 epitope

<400> 1

Arg	Asn	Val	Pro	Pro	Ile	Phe	Asn	Asp	Val	Tyr	Trp	Ile	Ala	Phe
1				5					10					15

<210> 2

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> mimetic peptide for apolipoprotein B-100 epitope

<400> 2

Arg	Phe	Arg	Gly	Leu	Ile	Ser	Leu	Ser	Gln	Val	Tyr	Leu	Asp	Pro
1				5					10					15

<210> 3

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> mimetic peptide for apolipoprotein B-100 epitope

<400> 3

Ser Val Cys Gly Cys Pro Val Gly His His Asp Val Val Gly Leu
1 5 10 15

<210> 4

<211> 204

<212> DNA

<213> Artificial Sequence

<220>

<223> DNA sequence for tetrameric mimetic peptide

<220>

<221> CDS

<222> (1)..(204)

<400> 4

gtc gac cgt aat gtt cct cct atc ttc aat gat gtt tat tgg att gca 48
Val Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile Ala
1 5 10 15

ttc ctc gac cgt aat gtt cct cct atc ttc aat gat gtt tat tgg att 96
Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile
20 25 30

gca ttc ctc gac cgt aat gtt cct cct atc ttc aat gat gtt tat tgg 144
Ala Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp
35 40 45

att gca ttc ctc gac cgt aat gtt cct cct atc ttc aat gat gtt tat 192
Ile Ala Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr
50 55 60

tgg att gca ttc 204
Trp Ile Ala Phe
65

<210> 5

<211> 68

<212> PRT

<213> Artificial Sequence

<400> 5

Val Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile Ala
1 5 10 15

Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile
20 25 30

Ala Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp
35 40 45

Ile Ala Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr
50 55 60

Trp Ile Ala Phe
65

<210> 6

<211> 180

<212> DNA

<213> Hepatitis B virus

<220>

<221> CDS

<222> (1)..(177)

<223> Hepatitis B virus preS2

<220>

<221> terminator

<222> (178)..(180)

<400> 6

atg cag tgg aac tcc acc aca ttc cac caa gct ctg cta gat ccc aga 48
Met Gln Trp Asn Ser Thr Thr Phe His Gln Ala Leu Leu Asp Pro Arg
1 5 10 15

gtg agg ggc cta tat ttt cct gct ggt ggc tcc agt tcc gga aca gta 96
Val Arg Gly Leu Tyr Phe Pro Ala Gly Gly Ser Ser Ser Gly Thr Val
20 25 30

aac cct gtt ccg act act gcc tca ccc ata tgg tca atc ttc tgg agg 144
Asn Pro Val Pro Thr Thr Ala Ser Pro Ile Ser Ser Ile Phe Ser Arg
35 40 45

act ggg gac cct gca ccg aac ctc gag cgg tca taa 180
 Thr Gly Asp Pro Ala Pro Asn Leu Glu Arg Ser
 50 55

<210> 7
 <211> 59
 <212> PRT
 <213> Hepatitis B virus

<400> 7
 Met Gln Trp Asn Ser Thr Thr Phe His Gln Ala Leu Leu Asp Pro Arg
 1 5 10 15

Val Arg Gly Leu Tyr Phe Pro Ala Gly Gly Ser Ser Ser Gly Thr Val
 20 25 30

Asn Pro Val Pro Thr Thr Ala Ser Pro Ile Ser Ser Ile Phe Ser Arg
 35 40 45

Thr Gly Asp Pro Ala Pro Asn Leu Glu Arg Ser
 50 55

<210> 8
 <211> 444
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> DNA sequence for hybride polypeptide

<220>
 <221> CDS
 <222> (1)..(441)

<220>
 <221> terminator
 <222> (441)..(444)

<400> 8
 atg aga gga tgg cat cac cat cac cat cac gga tcc gat gat gat gac
 Met Arg Gly Ser His His His His His His Gly Ser Asp Asp Asp Asp
 1 5 10 15

aag atc gtc gac cgt aat gtt cct cct atc ttc aat gat gtt tat tgg	96
Lys Ile Val Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp	
20 25 30	

att gca ttc ctc gac cgt aat gtt cct cct atc ttc aat gat gtt tat	144
Ile Ala Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr	
35 40 45	

tgg att gca ttc ctc gac cgt aat gtt cct cct atc ttc aat gat gtt	192
Trp Ile Ala Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val	
50 55 60	

tat tgg att gca ttc ctc gac cgt aat gtt cct cct atc ttc aat gat	240
Tyr Trp Ile Ala Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp	
65 70 75 80	

gtt tat tgg att gca ttc ctc gac atg cag tgg aac tcc acc aca ttc	288
Val Tyr Trp Ile Ala Phe Leu Asp Met Gln Trp Asn Ser Thr Thr Phe	
85 90 95	

cac caa gct ctg cta gat ccc aga gtg agg ggc cta tat ttt cct gct	336
His Gln Ala Leu Leu Asp Pro Arg Val Arg Gly Leu Tyr Phe Pro Ala	
100 105 110	

ggt ggc tcc agt tcc gga aca gta aac cct gtt ccg act act gcc tca	384
Gly Gly Ser Ser Ser Gly Thr Val Asn Pro Val Pro Thr Thr Ala Ser	
115 120 125	

ccc ata tgg tca atc ttc tgg agg act ggg gac cct gca ccg aac ctc	432
Pro Ile Ser Ser Ile Phe Ser Arg Thr Gly Asp Pro Ala Pro Asn Leu	
130 135 140	

gag cgg tca taa	444
Glu Arg Ser	
145	

<210> 9
 <211> 147
 <212> PRT
 <213> Artificial Sequence

<400> 9
Met Arg Gly Ser His His His His His His Gly Ser Asp Asp Asp Asp
1 5 10 15

Lys Ile Val Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp
 20 25 30
 Ile Ala Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr
 35 40 45
 Trp Ile Ala Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp Val
 50 55 60
 Tyr Trp Ile Ala Phe Leu Asp Arg Asn Val Pro Pro Ile Phe Asn Asp
 65 70 75 80
 Val Tyr Trp Ile Ala Phe Leu Asp Met Gln Trp Asn Ser Thr Thr Phe
 85 90 95
 His Gln Ala Leu Leu Asp Pro Arg Val Arg Gly Leu Tyr Phe Pro Ala
 100 105 110
 Gly Gly Ser Ser Ser Gly Thr Val Asn Pro Val Pro Thr Thr Ala Ser
 115 120 125
 Pro Ile Ser Ser Ile Phe Ser Arg Thr Gly Asp Pro Ala Pro Asn Leu
 130 135 140
 Glu Arg Ser
 145

<210> 10
 <211> 432
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> DNA sequence for PTB14

<220>
 <221> CDS
 <222> (1)..(429)

<400> 10
 atg aga gga tcg cat cac cat cac cat cac gga tcc gat gat gat gac
 Met Arg Gly Ser His His His His His His Gly Ser Asp Asp Asp Asp
 1 5 10 15

aag atc gtc gac atg cag tgg aac tcc acc aca ttc cac caa gct ctg	96
Lys Ile Val Asp Met Gln Trp Asn Ser Thr Thr Phe His Gln Ala Leu	
20 25 30	
cta gat ccc aga gtg agg ggc cta tat ttt cct gct ggt ggc tcc agt	144
Leu Asp Pro Arg Val Arg Gly Leu Tyr Phe Pro Ala Gly Gly Ser Ser	
35 40 45	
tcc gga aca gta aac cct gtt ccg act act gcc tca ccc ata tcg tca	192
Ser Gly Thr Val Asn Pro Val Pro Thr Thr Ala Ser Pro Ile Ser Ser	
50 55 60	
atc ttc tcg aag act ggg gac cct gca ccg aac ctc gac cgt aat gtt	240
Ile Phe Ser Lys Thr Gly Asp Pro Ala Pro Asn Leu Asp Arg Asn Val	
65 70 75 80	
cct cct atc ttc aat gat gtt tat tgg att gca ttc ctc gac cgt aat	288
Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile Ala Phe Leu Asp Arg Asn	
85 90 95	
gtt cct cct atc ttc aat gat gtt tat tgg att gca ttc ctc gac cgt	336
Val Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile Ala Phe Leu Asp Arg	
100 105 110	
aat gtt cct cct atc ttc aat gat gtt tat tgg att gca ttc ctc gac	384
Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile Ala Phe Leu Asp	
115 120 125	
cgt aat gtt cct cct atc ttc aat gat gtt tat tgg att gca ttc t	430
Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile Ala Phe	
130 135 140	
aa	432

<210> 11
 <211> 143
 <212> PRT
 <213> Artificial Sequence

<400> 11
 Met Arg Gly Ser His His His His His His Gly Ser Asp Asp Asp Asp
 1 5 10 15

Lys Ile Val Asp Met Gln Trp Asn Ser Thr Thr Phe His Gln Ala Leu

20 25 30

Leu Asp Pro Arg Val Arg Gly Leu Tyr Phe Pro Ala Gly Gly Ser Ser
35 40 45

Ser Gly Thr Val Asn Pro Val Pro Thr Thr Ala Ser Pro Ile Ser Ser
50 55 60

Ile Phe Ser Lys Thr Gly Asp Pro Ala Pro Asn Leu Asp Arg Asn Val
65 70 75 80

Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile Ala Phe Leu Asp Arg Asn
85 90 95

Val Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile Ala Phe Leu Asp Arg
100 105 110

Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile Ala Phe Leu Asp
115 120 125

Arg Asn Val Pro Pro Ile Phe Asn Asp Val Tyr Trp Ile Ala Phe
130 135 140